

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Animal Industry  
Animal Nutrition Division

PHYSICAL AND CHEMICAL COMPOSITION OF CHICKENS AND TURKEYS  
Compiled from various sources by H. M. Harshaw

Physical composition of chickens and turkeys

Ratio of -	Item	Chickens			Turkeys	
		Males	Females	Capons	Males	Females
		Percent	Percent	Percent	Percent	Percent
Dressed weight <u>1/</u> to live weight	Average	88.5	89.5	89.0	89.8	89.9
	Range	85.6-91.7	88.5-92.0	87.8-91.9	87.4-91.3	87.8-91.8
Drawn weight <u>2/</u> to dressed weight	Average	79.1	80.8	81.2	86.5	86.4
	Range	76.3-83.7	77.5-82.4	77.9-83.7	85.1-87.9	85.2-88.2
Breast muscle to dressed weight	Average	12.6	---	---	19.6	19.8
Leg muscle to dressed weight	Average	19.4	---	---	19.2	18.7
Remaining edible <u>3/</u> to dressed weight	Average	24.4	---	---	24.7	26.6
Skin to dressed weight	Average	6.9	---	---	6.4	7.2
Fatty tissue to dressed weight	Average	3.5	---	---	4.8	7.0
Muscle other than breast and leg muscle to dressed weight	Average	4.6	---	---	6.1	6.3
Edible organs to dressed weight	Average	4.5	---	---	3.4	3.6
Total edible to dressed weight	Average	56.8	59.7	61.0	63.9	65.0
	Range	50.9-63.9	51.2-64.2	55.9-67.5	62.5-64.7	63.9-66.8

1/ Dressed weight is the weight of the carcass after bleeding and picking.

2/ Drawn weight is the weight of the carcass after removal of the head, shanks, feet, and inedible organs.

3/ The remaining edible portion is the entire edible portion (including organs) other than the breast and leg muscle.

NOTE: The figures given for percent of dressed and drawn weight are averages for birds of various weights. Mature, well-fleshed, or very fat birds would have dressed and drawn weights near the top of the given ranges and thin, immature, or unfattened birds near the bottom. The percent of total edible portion would be near the top of the given ranges in the case of mature, well-fleshed, and very fat birds and toward the bottom in young, unfattened ones.

(Over)

Chemical composition of edible portions of chickens and turkeys

Breast muscle				
Kind of fowl	Protein	Fat	Ash	Water
	Percent	Percent	Percent	Percent
Chickens, male	23.5	1.12	1.11	74.6
Turkeys, male	24.6	1.03	1.16	73.4
Turkeys, female	24.8	1.12	1.20	73.1
Leg muscle				
Chickens, male	20.1	4.39	1.05	74.5
Turkeys, male	20.7	4.00	1.06	73.7
Turkeys, female	20.7	4.77	1.05	73.2
Remaining edible portion				
Chickens, male	17.3	24.1	.79	57.6
Turkeys, male	16.3	33.6	.70	49.6
Turkeys, female	13.9	41.4	.65	43.6
Total edible portion				
Chickens, male	19.9	10.9	.97	68.3
Chickens, female	19.3	11.9	1.09	65.8
Capons	18.7	11.9	1.03	66.2
Turkeys, male	20.6	12.7	1.00	65.8
Turkeys, female	19.4	17.9	.95	61.8

Mineral content of flesh of chickens and turkeys

Kind of fowl	Sodium	Potassium	Magnesium	Calcium	Iron
	Percent	Percent	Percent	Percent	Percent
Chickens	0.091	0.401	0.0288	0.0119	0.0047
Turkeys	.130	.367	.0282	.0383	.0038

  

Kind of fowl	Phosphorus	Sulfur	Chlorine	Iodine	Manganese
	Percent	Percent	Percent	Percent	Percent
Chickens	0.266	0.303	0.074	0.00015	0. ---
Turkeys	.320	.234	.123	.00012	.00005

Vitamin content per gram of fresh chicken tissues

	Thiamin		Riboflavin		Pantothenic acid		Ascorbic acid	
	Average	Range	Average	Range	Average	Range	Average	Range
	Mcg	Mcg	Mcg	Mcg	Mcg	Mcg	Mcg	Mcg
Leg muscle	1.9	1.1-2.2	2.8	1.0-4.2	7.0	---	40	---
Breast muscle	.77	---	.7	.4-.8	---	---	---	---
Liver	1.9	1.6-2.1	26.2	11.2-32.9	57.8	---	280	---
Heart	2.2	---	11.4	4.3-18.4	43.6	---	80	---
Gizzard	---	---	---	1.3-4.1	---	---	17	---

Except in the case of ascorbic acid, the vitamin content of chicken tissues is dependent on the vitamin content of the diet of the birds.

Vitamins A and D have been reported present in the skin, fat, flesh, and liver of chickens, but quantitative determinations have not been reported. Chicken livers are known to be especially high in their content of vitamins A and D. Chicken liver has been reported to contain 79 and heart 41 micrograms of niacin per gram of fresh tissue.

A microgram, (Mcg), is one millionth of a gram.